

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended) A machine for grinding optical lenses, of the type comprising:

- [[-]] a grindstone set (21) mounted rotatably about a first axis (~~A-A'~~);
- [[-]] a lens support (15) furnished with means (37) for rotating the lens (35) about a second axis (~~B-B'~~) which, at least during grinding, is substantially parallel to said first axis (~~A-A'~~);
- [[-]] means (~~13, 39~~) for relative axial and radial positioning of the lens support (15) relative to the grindstone set (21); and
- [[-]] a tool-carrier assembly (17) comprising at least one tool (~~81; 83; 85~~) mounted integral with a tool-carrier shaft (75) rotatable about a third axis (~~C-C'~~), means (79) for actuating the tool-carrier shaft (75) suitable for moving the tool (~~81; 83; 85~~) between a retracted position and an active position in the vicinity of said second axis (~~B-B'~~), the third axis (~~C-C'~~) having an inclination that can be varied relative to the second axis (~~B-B'~~),

the tool-carrier assembly (17) also comprising means (79) for controlling, on a value dependent on the value of the curvature of the lens, the angle of inclination (~~α~~) of the third axis (~~C-C'~~) relative to the second axis (~~B-B'~~) when the tool (~~81; 83; 85~~) is distant from the lens (35),

characterized in that the control means (79) are suitable for retracting the tool-carrier shaft (75) via the control of said angle of inclination (~~α~~).

Claim 2 (Currently Amended) The grinding machine as claimed in claim 1, ~~characterized in that it comprises~~ further comprising means (~~13, 39~~) for relative movement of the tool-carrier shaft (75) relative to the lens support (15) in translation along the third axis (~~C-C'~~) when the tool (~~81; 83; 85~~) is in the active position.

Claim 3 (Currently Amended) The grinding machine as claimed in claim 2, ~~characterized in that~~ wherein said means (~~13, 39~~) for relative movement comprise means (13) for relative translation of the tool-carrier shaft (75) relative to the second axis (~~B-B'~~) in a first direction, particularly in a direction parallel to the second axis (~~B-B'~~), means (53) for relative pseudo-translation of the tool-carrier shaft (75) relative to the second axis (~~B-B'~~) in a second direction distinct from the first direction, particularly a direction perpendicular to the second axis (~~B-B'~~), and means (19) for synchronizing said translation and pseudo-translation means (39).

Claim 4 (Currently Amended) The grinding machine as claimed in claim 2, ~~characterized in that~~ wherein the grindstone set (21) comprises a grindstone support (22) furnished with means (27, 29) for axial translation, and in that the tool-carrier assembly (17) is connected in translation to said grindstone support (22).

Claim 5 (Currently Amended) The grinding machine as claimed in claim 2, ~~characterized in that~~ wherein the lens support (15) is furnished with radial pseudo-translation means (39).

Claim 6 (Currently Amended) The grinding machine as claimed in claim 1, ~~characterized in that~~ wherein the tool-carrier assembly (17) is mounted rotatably on the grindstone support (22) about an axis (~~D-D'~~) perpendicular to said first axis (~~A-A'~~).

Claim 7 (Currently Amended) The grinding machine as claimed in claim 1, ~~characterized in that~~ wherein said control means (79) control the angle (α) of inclination of the third axis (~~C-C'~~) relative to the second axis (~~B-B'~~) between 0 and 30° in the active position of said shaft (75).

Claim 8 (Currently Amended) The grinding machine as claimed claim 1, ~~characterized in that~~ wherein said control means (79) are suitable for retracting said shaft (75) under the grindstone set (21) by moving it in front of the latter.

Claim 9 (Currently Amended) The grinding machine as claimed in claim 1, ~~characterized in that~~ wherein the at least one tool ~~is an additional~~ includes a back-beveling grindstone (81).

Claim 10 (Currently Amended) The grinding machine as claimed in claim 1, ~~characterized in that~~ wherein the at least one tool ~~is~~ includes a grooving grindstone (83).

Claim 11 (Currently Amended) The grinding machine as claimed in claim 1, ~~characterized in that~~ wherein the at least one tool ~~is~~ includes a drilling tool (85).

Claim 12 (Currently Amended) The grinding machine as claimed in claim 1, ~~characterized in that it comprises~~ further comprising means (13, 39) for relative movement of the tool-carrier shaft (75) relative to the lens support (15) in translation along the third axis (C-C') when the tool (81; 83; 85) is in the active position, and in that said relative movement means (13, 39) comprise means (13) for relative translation of the tool-carrier shaft (75) relative to the second axis (B-B') in a first direction, parallel to the second axis (B-B'), means for pseudo-translation of the lens support (15) relative to the second axis (B-B') in a second direction perpendicular to the second axis (B-B'), and means (19) for synchronizing said means of translation (13) and pseudo-translation (39).

Claim 13 (Currently Amended) The grinding machine as claimed in claim 3, ~~characterized in that~~ wherein the grindstone set (21) comprises a grindstone support (22) furnished with means (27, 29) for axial translation, and in that the tool-carrier assembly (17) is connected in translation to said grindstone support (22).

Claim 14 (Currently Amended) The grinding machine as claimed in claim 3, ~~characterized in that~~ wherein the lens support (15) is furnished with radial pseudo-translation means (39).

Claim 15 (Currently Amended) The grinding machine as claimed in claim 4, ~~characterized in that~~ wherein the lens support (15) is furnished with radial pseudo-translation means (39).

Claim 16 (Currently Amended) The grinding machine as claimed in claim 13, ~~characterized in that~~ wherein the lens support (15) is furnished with radial pseudo-translation means (39).

Claim 17 (Currently Amended) The grinding machine as claimed in claim 2, ~~characterized in that~~ wherein the tool-carrier assembly (17) is mounted rotatably on the grindstone support (22) about an axis (D-D') perpendicular to said first axis (A-A').

Claim 18 (Currently Amended) The grinding machine as claimed in claim 3, ~~characterized in that~~ wherein the tool-carrier assembly (17) is mounted rotatably on the grindstone support (22) about an axis (D-D') perpendicular to said first axis (A-A').

Claim 19 (Currently Amended) The grinding machine as claimed in claim 4, ~~characterized~~
~~in that~~ wherein the tool-carrier assembly (17) is mounted rotatably on the grindstone support (22)
about an axis (~~D-D'~~) perpendicular to said first axis (~~A-A'~~).

Claim 20 (Currently Amended) The grinding machine as claimed in claim 13, ~~characterized~~
~~in that~~ wherein the tool-carrier assembly (17) is mounted rotatably on the grindstone support (22)
about an axis (~~D-D'~~) perpendicular to said first axis (~~A-A'~~).